

- Unpaired highest-prediction accuracy;

$$A_u = \frac{c_o(.,.) - c_p(.,.)}{c_o(.,.)} \times 100\%$$

- Normalized bias test of all pairs with observations above 60 parts per billion (ppb);

$$D^* = \frac{1}{N_T} \sum_{i=1}^N \sum_{j=1}^{H_i} \frac{c_o(i, j) - c_p(i, j)}{c_p(i, j)}$$

and

- Gross error of all pairs with observations above 60 ppb.

$$E_d^* = \frac{1}{N_T} \sum_{i=1}^N \sum_{j=1}^{H_i} \frac{|c_o(i, j) - c_p(i, j)|}{c_p(i, j)}$$

where

$A_u$	=	unpaired highest-prediction accuracy (quantifies the difference between the magnitude of the highest 1-hour observed value and the highest 1-hour predicted value)
$E_d^*$	=	normalized gross error for all hourly prediction-observation pairs for hourly observed values > 60 ppb
$c_o(.,.)$	=	maximum 1-hour observed concentration over all hours and monitoring stations
$c_p(.,.)$	=	maximum 1-hour predicted concentration over all hours and surface grid squares
$D^*$	=	normalized bias obtained from all hourly prediction-observation pairs
$N$	=	number of monitoring stations
$H_i$	=	number of hourly prediction-observation pairs for monitoring station I
$N_T$	=	total number of station hours
	=	$\sum_{i=1}^N H_i$
$c_o(i, j)$	=	observed value at monitoring station I for hour j
$c_p(i, j)$	=	predicted value at monitoring station I for hour j